

Nsci 2001 Laboratory

Treat these specimens with care and respect. They were generously donated by individuals for the purpose of education; many students utilize these samples to learn neuroanatomy. Damaging the specimens is to the detriment of all neuroscience students at U of M. Always handle the specimens gently and with gloved hands. Absolutely no photos or videos allowed.

BE SURE ALL PARTS OF YOUR BRAIN/SPINAL CORD STAYS WITH ITS BUCKET!! SPECIMENS NEED TO BE KEPT TOGETHER!! EVERYWHERE YOUR BRAIN GOES, YOUR BUCKET SHOULD ALSO GO.

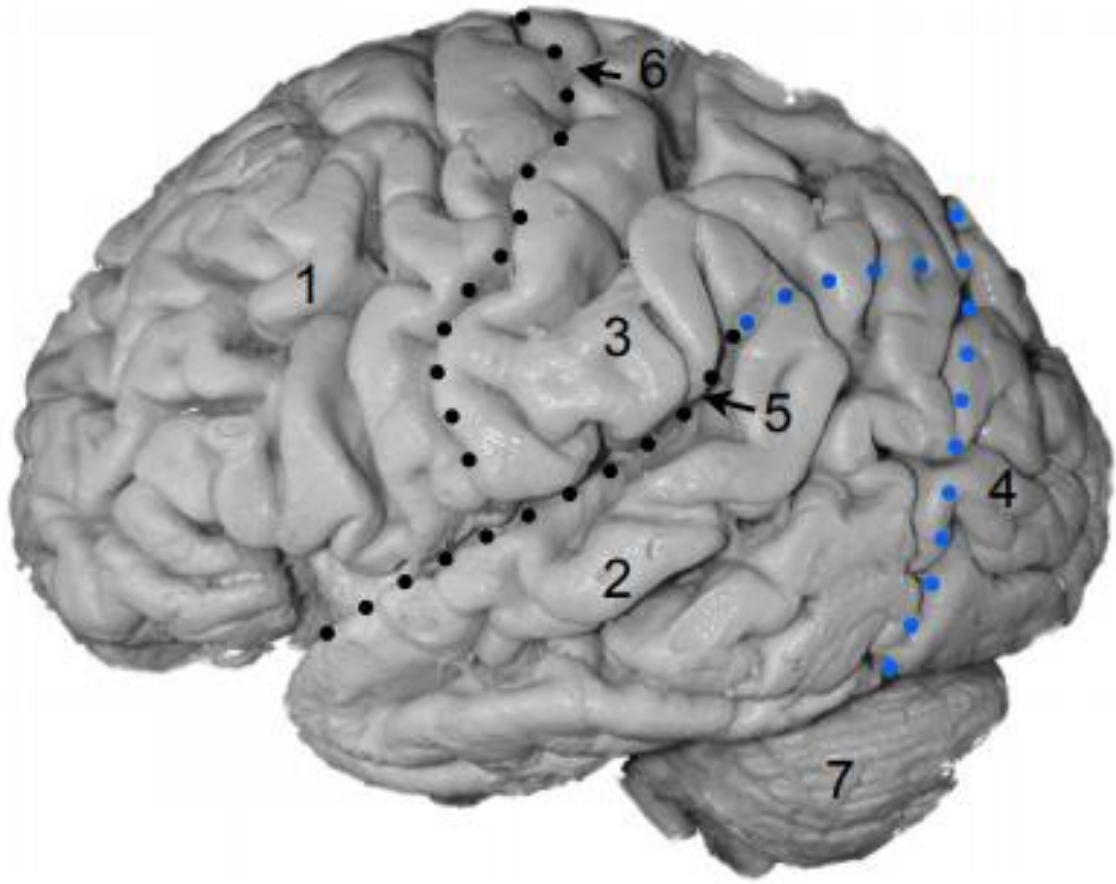
DO NOT THROW OUT THE FORAMLIN IN YOUR BUCKET!!

1. Pair off into groups of 3-4 people
2. Each person put on gloves
3. Get one specimen pan/group.
4. Get a yellow bucket containing brains and spinal cord
5. Keep the bucket with you while one person in the group rinses the brain/spinal cord with water.
6. Put some water in the bottom of the specimen pan
7. Wet some paper towels to keep brains not being looked at moist
8. Carefully bring your brains and their buckets to a bench space

Go through the structures listed here and identify each on your specimens. If your specimens do not have a structure listed, then see if another group has a good example you can see.

LATERAL SURFACE OF THE BRAIN

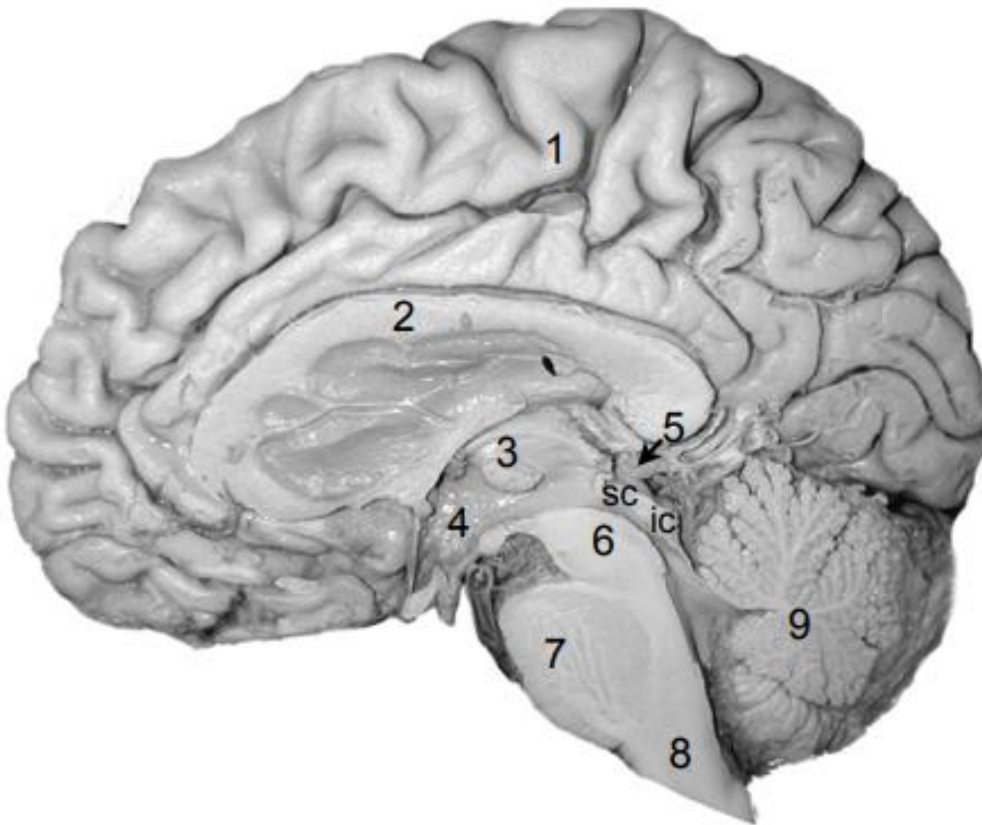
- cerebral cortex
- 1. frontal lobe
- 2. temporal lobe
- 3. parietal lobe
- 4. occipital lobe
- 5. lateral sulcus
- 6. central sulcus
- 7. cerebellum (hemisphere)



Q. Which lobes does the central sulcus separate?

MEDIAL SURFACE OF THE BRAIN

1. medial surface of the cerebral hemisphere (including the limbic lobe)
2. corpus callosum
3. thalamus
4. hypothalamus
5. pineal body
6. midbrain including the superior colliculus (sc) and inferior colliculus (ic)
7. pons
8. medulla
9. cerebellum (vermis)

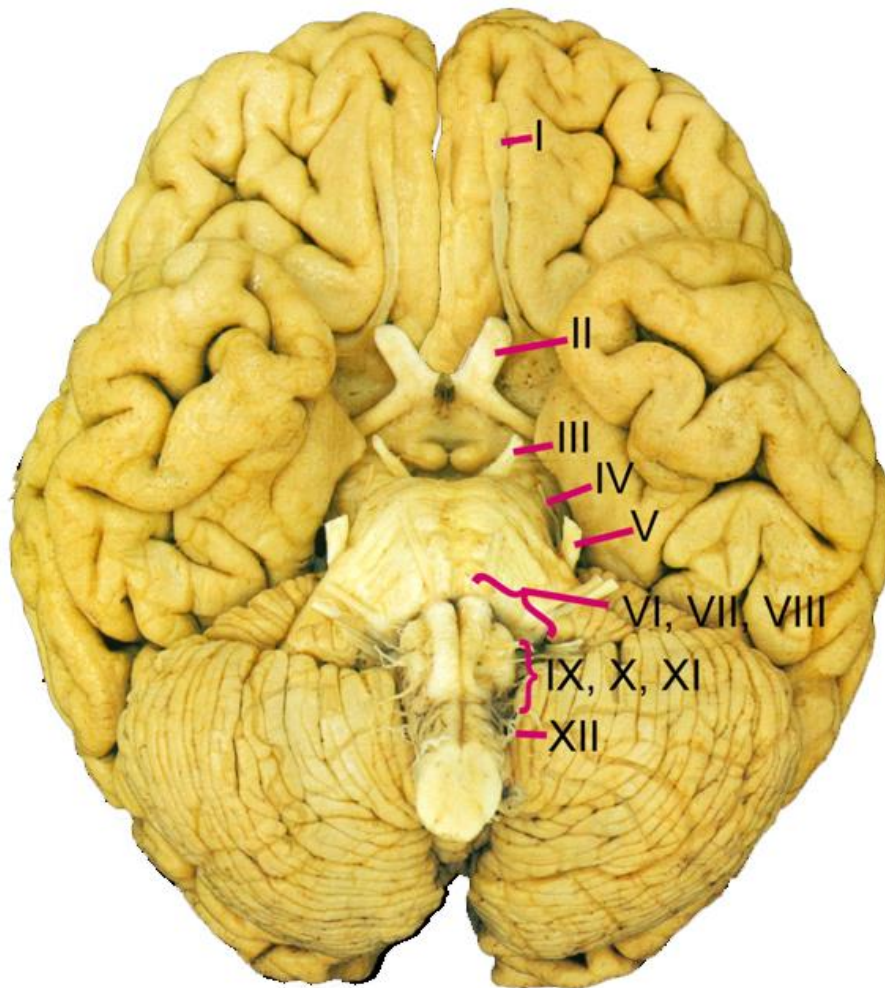


Q. What substance is produced by the pineal body? (Hint: Some people take it to help them sleep.)

CRANIAL NERVES AND THE VENTRAL SURFACE OF THE BRAIN

Identify those structures listed for the medial surface of the brain that are visible on the ventral surface.

Try to identify all 12 pairs of cranial nerves. You may need to look at several specimens.



- I Olfactory
- II Optic
- III Oculomotor
- IV Trochlear
- V Trigeminal
- VI Abducens
- VII Facial
- VIII Vestibulocochlear
- IX Glossopharyngeal
- X Vagus
- XI Accessory *
- XII Hypoglossal

Q. What is the function of the vestibulocochlear nerve (CN VIII)?

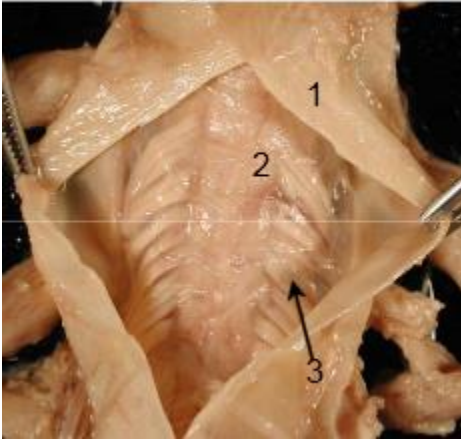
Q. In what part of the brain are the pyramids? Identify the pyramids.

Q. Where are the cell bodies for the neurons that give rise to the axons that run in the cerebral peduncles? Identify the cerebral peduncles.

SPINAL CORD

Identify the following structures on the spinal cord specimens.

1. Dura mater [meninges]
2. Arachnoid membrane [meninges] covering the spinal cord
3. Dorsal root (continues as a spinal nerve after joining a ventral root)



1. Conus medullaris
2. Filum terminale [extension of meninges]
3. Cauda equina



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